Name Date

*You may use a calculator for this part of the assessment. Show your work to receive full credit.*

1. A book costs ,and a video game costs . If sales tax is , what is the total cost of these items after sales tax? Round your answer to the nearest cent.
2. A customer returns an item to a toy store in Wyoming County, which has a sales tax rate of 8%. The toy store has another location in Allegany County, which has a sales tax rate of 8.5%, and the customer shops at both locations. The customer’s receipt shows tax was charged on a item. Was the item purchased at the Wyoming County store or the Allegany County store? Explain and justify your answer by showing your math work.
3. Kara works at a fine jewelry store and earns commission on her total sales for the week. Her weekly paycheck was in the amount of, including her salary of . Her sales for the week totaled . Express her rate of commission as a percent, rounded to the nearest whole number.
4. Kacey and her three friends went out for lunch, and they wanted to leave a tip. The receipt shown below lists the lunch total before tax and tip. The tip is on the cost of the food plus tax. The sales tax rate in Pleasantville is .



* 1. Use mental math to estimate the approximate total cost of the bill including tax and tip to the nearest dollar. Explain how you arrived at your answer.
  2. Find the actual total of the bill including tax and tip. If Kacey and her three friends split the bill equally, how much will each person pay including tax and tip?

1. The water level in a swimming pool increased from feet to feet. What is the percent increase in the water level rounded to the nearest tenth of a percent? Show your work.
2. Cool Tees is having a Back to School sale where all t-shirts are discounted by . Joshua wants to buy five shirts: one costs , two cost each, and two others cost each.
   1. What is the total cost of the shirts including the discount?
   2. Joshua remembered he had a coupon in his pocket that would take an additional off the price of the shirts. Calculate the new total cost of the shirts including the sales tax.
   3. If the price of each shirt is of the wholesale price, write an equation and find the wholesale price for a shirt.
3. Tierra, Cameron, and Justice wrote equations to calculate the amount of money in a savings account after one year with interest paid annually on a balance of dollars. Let represent the total amount of money saved.

Tiara’s Equation:

Cameron’s Equation:

Justice’s Equation:

* 1. The three students decided to see if their equations would give the same answer by using a balance. Find the total amount of money in the savings account using each student’s equation. Show your work.
  2. Explain why their equations will or will not give the same answer.

1. In Mr. Johnson’s third and fourth period classes, of the students earned an A on a quiz. Let be the total number of students in Mr. Johnson’s classes. Answer the following questions, and show your work to support your answers.
   1. If students earned an A, write an equation involving that relates the number of students who earned an A to the total number of students in Mr. Johnson’s third and fourth period classes.
   2. Solve your equation in part (a) to find how many students are in Mr. Johnson’s third and fourth period classes.
   3. Of the students in Mr. Johnson’s 3rd and 4th periods, are girls. How many are boys?